# Aerospace Medical Support in Russia

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#### Disclosure Information

82<sup>nd</sup> Annual Scientific and Human Performance Meeting Richard Cole, MD

I have no financial relationships to disclose.

I will not discuss off-label use and/or investigational use in my presentation



Star City, Russia



#### Overview

- ➤ Role of Flight Surgeon at GCTC
  - Medical advocate for astronauts (U.S., CSA, ESA, JAXA)
  - Medical Care inGCTC Illness/Injury







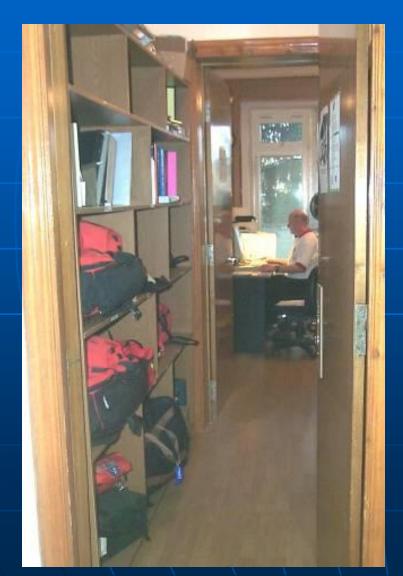
#### **Current Duties**

- ✓ Maintain and Operate Star City medical office
- ✓ Provide care to astronauts, family members / guests, civil servants, and contractors in Star City
  - Provide Continuum of Medical Capability
    - Urgent Care Needs
    - ATLS/ACLS Capability
    - Medical Evacuation
- ✓ First U.S. physician responder for emergency landings





### Office





#### Office





## "Portable Equipment"





#### Hazardous Training Responsibilities

- Hydrolab
- Centrifuge
- Soyuz Trainers
- EVA Stand
- Zvezda Vacuum Chamber
- Zvezda Suited Seat Test
- Chkalovskiy Vacuum Chambers
- Water Survival (Sochi or Sevastopol or Hydrolab)
- Winter Survival (Rousa or GCTC)
- EVA Support from MCC (TsUP)

#### Hydrolab

**Moving Floor** 

**Hyperbaric Chamber** 





### Centrifuge

**TsF-18** 

TsF-7





### Building One

#### **Soyuz Trainer**



#### **Stand Run**







## Zvezda





## Hazardous Training Responsibilities

**Water Survival** 

**Winter Survival** 





#### Chkalovskaya

- EVA hatch practice
  - Crew in EVA suit practices hatch opening at near vacuum
- ISS leak isolation
  - Crew practices Russian segment response to ISS depress.



## Landing Support



## Realities of a Potential Hazardous Training Mishap

- Russian and American FS will work together
  - Determine what medical capabilities are available and which facilities are needed
  - We support and attempt to implement our EMS plan as soon as possible/necessary



#### Questions?

## Back-up Slides





